REMARKS

With this Amendment, Applicant amends claims 13, 14, 15, 19, 20 and 23. No new matter is added. Therefore, claims 1-33 are all the claims currently pending in the present application. Based on the foregoing amendments and the following remarks, Applicant requests reconsideration of the application and allowance of the claims.

I. Rejection of Claims 1-6, 8-13, 19-24, 26-27 & 29-33 Under 35 U.S.C. § 102(e)

Claims 1-6, 8-13, 19-24, 26-27 and 29-33 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Valentine et al. (U.S. Patent No. 5,748,678; hereinafter "Valentine").

Claim 1 requires a "method for defining the relationship between frequency and amplitude of *a pulse function modulating a data stream* for transmission in a telecommunications system in accordance with a predetermined modulation scheme to compensate for distortion by a component of the transmitter, wherein the telecommunications system has desired criteria for respective associated *cost parameters*, and the *pulse function for modulating* is *determined by*: *defining cost functions* representing the deviation of a respective one of the *cost parameters* from the associated desired system criterion; and defining the amplitude of the pulse function over a range of frequencies in dependence on the cost functions *and* the distortion for which compensation is to be made."

Applicant respectfully submits that Valentine does not teach or suggest the above requirements of claim 1. In rejecting claim 1, the Examiner suggests that column 1, lines 9-40, column 4, lines 9-32 and FIG. 4 of Valentine teach all of the features of claim 1. Applicant respectfully disagrees.

In contrast to claim 1, Valentine is directed to a radio apparatus that reduces distortion caused by interference (i.e., "adjacent channel splatter") from an adjacent channel when the radio apparatus 10 operates in a non-linear region. (Col. 1, lines 23-27) To be precise, Valentine discloses the use of a pre-distortion system utilizing a training routine to reduce intermodulation products in adjacent channels (i.e., adjacent channel splatter). (Abstract) As

shown in FIG. 4 of Valentine, input signals (i.e., baseband signals I, Q) are selectably provided (via switch 62) to either a full-rate modulator 64 or a half-rate modulator 66 (and a root raised cosine filter 70) where they are modulated prior to being sent to a transmitter chain of the transmitter. Valentine discloses that during training the half-rate modulator 66 is selected.

More particularly, during training, Valentine discusses that the modulated input signals (I, Q) are fed in parallel to pre-distortion circuit 28 and baseband processor 30. The pre-distortion circuit 28 pre-distorts the baseband signals where they are processed in the "transmitter chain passing through filter 72," digital to analog converter 32, and power amplifier 36 where the signals are amplified for supplying to antenna 38. (Col. 4, lines 20-24) Coupler 40 samples a portion of the signal output by power amplifier 36 so that the baseband processor 30 can compare the original signals (undistorted I and Q signals) with the fed back signals and derive information on the gain and phase changes introduced in the amplified signal in passing through the transmitter chain. From this information, which is stored in a memory, digital processing applies a curve-fit routine to the pre-distortion circuit 28 to pre-distort the baseband signals. (Col. 3, lines 40-43) As such, Valentine discloses that the modulated baseband signals (I, Q) are processed in a manner which is complementary to that introduced in the transmitter amplifier chain so that distortion is substantially cancelled and the radio apparatus 10 meets the required level of adjacent channel performance. (Col. 3, lines 12-14 and lines 18-24; Col. 4, lines 33-46)

Column 4, lines 27-32 of Valentine discusses that "[d]uring training the reduced rate modulator is selected so that modulated signals" (I, Q) "are transmitted at reduced rates which reduce intermodulation products in adjacent channels which typically occurs during training (See Col. 3, lines 58-63; See also Col. 2, lines 34-36) On the other hand, Valentine describes that "the full rate modulator is employed during normal operation, after training, when full linearization has been achieved, for transmitting normal traffic." (Column 4, lines 27-32)

In view of the foregoing, Valentine merely discloses the adjustment of a pre-distortion circuit 28 which adjusts baseband signals (via a training routine) following modulation of the baseband signals. Given that Valentine discloses adjusting baseband signals after modulation of the baseband signals, Valentine does not teach or suggest at least adjusting *a pulse function that*

is used for modulating a data stream for transmission to compensate for distortion by a component of the transmitter, as required by claim 1.

In rejecting claim 1 and suggesting that Valentine teaches the requirement for "the pulse function modulating is determined by: defining cost functions representing the deviation of a respective one of the cost parameters ...," (as recited in claim 1) the Examiner asserts that Valentine teaches "[t]he pulse function is determined by selecting either a full rate modulation or a half rate modulation to modulate the data signal ... and "[t]his is the defining cost functions representing the deviations of a respective one of the cost parameters from the desired associated system criterion." (See pgs. 2-3 of the Office Action) Applicant respectfully disagrees.

Valentine, at best, merely teaches that the transmitter disclosed therein selects either a full rate modulator (during normal operation) or a half rate modulator (during a training phase). Even *assuming arguendo* that the selection of a full rate modification or a half rate modification are cost functions, Valentine still does not teach or suggest that the cost functions represent the "*deviations* of a respective one of *the cost parameters* as, claimed. Nowhere in the disclosure of Valentine, and the Examiner cites to none, is there any teaching or suggestion of a deviation between cost parameters defining cost functions. To the extent that the Examiner is suggesting that distortion in the signals of Valentine corresponds to a cost parameter, Applicant notes that Valentine discloses that when the full rate modulation is selected (i.e., one of the alleged cost functions), that there is no distortion since "full [linearization] has been achieved" when full rate modulation is selected. (Col. 4, lines 27-29) As such, Valentine does not teach or suggest a deviation of a respective one of the cost parameters, as required by claim 1. Further, one skilled in the art would not construe the selection of full rate and reduced rate modulations to be cost functions. Those skilled in the art understand that cost functions are functions which are positive and get smaller the better a system operates. (See specification pg. 9, lines 11-12). Valentine therefore does not teach or suggest the *pulse function for modulating* is determined by "*defining cost functions* representing the deviation of a respective one of *the cost parameters*," as claimed.

In rejecting claim 1 and suggesting that Valentine teaches the requirement for "the pulse function for modulating is determined by: "defining the amplitude of the pulse function over a range of frequencies in dependence on the cost function and the distortion for which

compensation is to be made" (as required by claim 1) the Examiner posits that Valentine teaches this feature because "[t]he amplitude of the pulse function over a range of frequencies is dependent on the cost function and the distortion for which compensation is to be made is then conducted by filtering the signal in the half rate modulation path." (See pg. 3 of the Office Action) (emphasis added)

Contrary to the Examiner's assertion, Valentine merely discloses that baseband signals (I, Q) are adjusted after being modulated based on gain and phase changes introduced into the amplified signal passing through the transmitter chain. Nowhere in Valentine is there any teaching or suggestion, and the Examiner cites to none, that the amplitude of baseband signals of Valentine over a range of frequencies is dependent on "the cost function" (which the Examiner alleges corresponds to "selecting either [one of] a full rate modulation or half rate modulation") "and the distortion for which compensation is to be made," as contended by the Examiner. (See pgs. 2-3 of the Office Action) (emphasis added) The interrelationship of claim elements is simply not taught by Valentine. As such, Valentine does not teach or suggest at least "the pulse function for modulating is determined by: defining cost functions ... *and* defining the amplitude of the pulse function over a range of frequencies in *dependence* on the *cost function and* the *distortion* for which compensation is to be made," as claimed.

As noted above, claim 1 recites defining the amplitude of the pulse function over a range of frequencies. The present application teaches that data that defines the amplitude of the pulse function over a range of frequencies is stored in a lookup table, and the output of the lookup table is used to modulate the data stream. (See specification pg. 15, lines 10-26) The present application further teaches that the data in the lookup table only needs to be calculated once for each type of device, thus the data defining the amplitude of the pulse function over a range of frequencies is predetermined and static. (See specification pg. 3, lines 1-7; pg. 15, lines 28-29) The present application further teaches that the predictor data in the lookup table is based upon known (i.e., predetermined) component distortion and thus, the present application allows a static compensation of distortions caused by a component of a transmitter. (See specification pg. 2, line 28 to pg. 3, line 3) In contrast, Valentine discloses that distortion introduced by operation in other (i.e., adjacent) channels is determined and updated based on real-time (i.e., dynamic)

modeling in response to feedback signals. (See Abstract & FIG. 4; Col. 3, lines 29-33 of Valentine) Applicant respectfully submits that dynamic, feedback-based determination of distortion values which alleviate distortion introduced by adjacent channels is not the same as static predetermination of distortion values used to compensate for a component of a transmitter.

Based on at least the foregoing reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 1 and its dependent claims 2, 3, 4, 5, 6, 7, 8, 9, 17 and 18.

Since claim 10 contains features that are similar to, though not necessarily coextensive with, the features recited in claim 1, Applicant respectfully requests the Examiner to reconsider and withdraw the 102(e) rejection of independent claim 10 and its dependent claims 11, 12, 13, 14, 15, 16, 19, 20, 21 and 22.

With further regard to claim 10, Applicant submits that Valentine does not teach or suggest at least "[a] method for defining ... a *pulse function for acting on a data stream* ... for compensate for distortion by *first and second components* of the transmitter ...," as required by claim 10. Instead, Valentine at best, discusses that the transmitter disclosed therein is for adjusting baseband signals to compensate for adjacent channel splatter "introduced by the power amplifier" 36 of the transmitter disclosed therein. (See Abstract; See also Col. 2, lines 32-34) Nowhere in the disclosure of Valentine, and the Examiner cites to none, is there any teaching or suggestion relating to compensating "for distortion by first *and second components* of the transmitter, as required by claim 10. Since Valentine merely discloses adjusting baseband signals based on adjacent channel splatter generated by a single element, such as the power amplifier 36, Valentine also fails to teach or suggest "defining the cost parameters for *the second component* on the basis of the distortion to be compensated for in the *second component*," as required by claim 10. Valentine is simply altogether silent regarding defining cost parameters (which the Examiner alleges corresponds to selecting either a full rate modulation or a half rate modulation) for a second element of the transmitter 12.

Additionally, given that Valentine merely discloses adjusting baseband signals based on adjacent channel splatter generated by a single element, Valentine also fails to teach or suggest "defining the amplitude of the pulse function over a range of frequencies in *dependence* upon the

distortion functions of the *second* component *and* the pulse function defined for *the first* component, as required by claim 10. Nowhere in Valentine is there any teaching or suggestion, and the Examiner cites to none, relating to defining baseband signals disclosed therein depending on distortion of a second component of a transmitter and a pulse defined for a first component of a transmitter.

For at least these additional reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 10 and its dependent claims 11, 12, 13, 14, 15, 16, 19, 20, 21 and 22.

Since claim 23, as amended, contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 1, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 23.

Because claim 24 contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 23, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 24 and its dependent claim 25.

Since claim 26 contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 24, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 26, for at least the reasons submitted for claim 24.

Because claim 27 contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 26, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of claim 27.

Given that claim 29 contains features that are analogous to, though not necessarily coextensive with, the features recited in claim 1, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 29 and its dependent claims 30 and 31.

With further regard to claim 29, Applicant submits that Valentine does not teach or suggest at least "a dual mode communication device operable in a *first* mode when *a first set of cost parameters* are desired and in a *second* mode when a *second set of cost parameters* are desired," as claimed. Nowhere in Valentine is there any teaching or suggestion (and the Examiner cites to none) that the radio apparatus 10 disclosed therein operates in a first mode

when a first set of cost parameters are desired and a second mode when a second set of cost parameters are desired.

To the extent that the Examiner is suggesting that the training routine of Valentine is a first mode (in which the half rate modulator 66 is selected) and normal operation of Valentine (in which the full rate modulator 64 is selected when full linearization has been achieved, for transmitting normal traffic channel) is a second mode, Valentine still does not teach or suggest the features of claim 29. To be precise, there is no teaching or suggestion in Valentine that the radio apparatus disclosed therein is operable during the training routine when a first set of cost parameters (or alternately, a second set of cost parameters) are desired. Similarly, there is no teaching or suggestion in Valentine that the radio apparatus is operable during the normal operation when a second set of cost parameters (or alternately, a first set of cost parameters) are desired. Applicant notes that in rejecting claim 29, the Examiner has not cited to any portion of Valentine which discloses a first set of cost parameters and a second set of cost parameters tied to modes of operation with regards to the radio apparatus of Valentine. If the Examiner persists in this rejection, Applicant respectfully requests the Examiner to point out sections of Valentine that disclose first and second sets of cost parameters linked to modes of operation.

Additionally, Applicant suggests that Valentine does not teach or suggest a dual mode communication device comprising, *inter alia*, a first pulse function generator for converting a data stream in accordance with a pulse function shaped in dependence on the first set of desired cost parameters and a second pulse function generator for converting a data stream in accordance with a pulse function shaped in dependence on the second set of desired cost parameters, as required by claim 29. Even *assuming arguendo* that the full rate modulator 64 and the half rate modulator 66 of Valentine are pulse function generators as suggested by the Examiner, there is no teaching or suggestion in Valentine, and the Examiner cites to none, relating to radio apparatus 10 operating in a first mode when *a first set* of cost parameters are desired and the full rate modulator 64 (or alternately, the half rate modulator 66) converting baseband signals "in accordance with a pulse function shaped in dependence on *the* first set of desired cost parameters," as claimed. Similarly, there is no teaching or suggestion in Valentine, and the Examiner cites to none, relating to the radio apparatus 10 operable in a second mode when *a*

second set of cost parameters are desired and the half rate modulator 66 (or alternately, the full rate modulator 64) converting baseband signals "in accordance with a pulse function shaped in dependence on *the* second set of desired cost parameters," as claimed. Nowhere in Valentine is there any teaching or suggestion that the signals disclosed therein are shapable depending on different sets of desired cost parameters, as required by claim 29.

At best, Valentine merely discusses that the half rate modulator 66 is selected for a training routine and the full rate modulator 64 is selected for normal operation. Valentine does not teach or suggest selection of the modulators depending on different modes with different sets of desired cost parameters. As such, Valentine also does not teach or suggest at least a dual mode communication device operable in *a first mode* when *a first set* of cost parameters are desired and in *a second mode* when *a second set* of cost parameters are desired, the communication device comprising, *inter alia*, "means for selecting the pulse function generator in accordance with *the mode* of operation of the communication device," as recited by claim 29.

For at least these additional reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 29 and its dependent claims 30 and 31.

With regards to claim 32, Applicant submits that Valentine does not teach or suggest "[a] dual mode communication device operable in *a first mode* when *a first set* of cost parameters are desired and in *a second mode* when *a second set* of cost parameters are desired, the radiotelephone comprising, *inter alia, a modulator* for modulating a data stream with a carrier signal in accordance with a predetermined modulation scheme in both *the first and second modes* of operation," as claimed. In contrast to claim 32, Valentine, at best, discloses a full rate modulator 64 for operation during a normal operation and a half rate modulator 66 for operation during a training routine, as discussed above. Specifically, Valentine discusses that the half rate modulator 66 is employed during the training routine to reduce adjacent channel splatter. Given that Valentine utilizes two different modulators, i.e., one during normal operation and one during a training routine, Valentine is incapable of teaching or suggesting a single "modulator for modulating a data stream ... in *both* the *first and second modes* of operation," as required by claim 32.

Additionally, similar to arguments discussed above with respect to claim 29, Valentine does not teach or suggest a first pulse function generator for shaping a data stream in accordance with a pulse function shaped in dependence on *the first set* of desired cost parameters. As such, Valentine is incapable of teaching or suggesting a first pulse function generator for shaping a data stream in accordance with a pulse function shaped in dependence on *the first set* of desired cost parameters *and distortion* by a component of the transmitter, as claimed.

Analogous to the arguments discussed above with respect to claim 29, nowhere in Valentine is there any teaching or suggestion, and the Examiner cites to none, relating to a second pulse function generator for shaping a data stream in accordance with a pulse function shaped in dependence on *the* second set of cost parameters. As such, Valentine is incapable of teaching or suggesting a second pulse function generator for shaping a data stream in accordance with a pulse function shaped in dependence on *the second set* of desired cost parameters *and distortion* by a component of the transmitter, as claimed. Valentine simply does not teach or suggest different sets of cost parameters tied to modes of operation in which the different sets of cost parameters (along with distortion by a component of the transmitter) are used by pulse generators to shape pulses.

Given that the selection of the full rate modulator 64 and the half rate modulator 66 does not depend on different modes with different sets of desired cost parameters, Valentine also fails to teach or suggest "means for selecting one of the pulse function generators in accordance with *the mode* of operation of the communication device," as claimed.

For at least these additional reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 32.

Given that claim 33 contains features that are analogous to, though not necessarily coextensive with, the features recited in independent claim 1, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 33.

With further regards to claim 33, Applicant submits that Valentine does not teach or suggest at least "defining a pulse function for *a second modulation* scheme for *the same* desired cost parameters," as claimed. In contrast to the Examiner's general assertion that Valentine teaches the features of claim 33, Applicant submits that Valentine, at best, discloses that the half

rate modulator 66 is employed during a training routine to reduce adjacent channel splatter whereas the full rate modulator 64 is employed during normal operation, after training when full linearization has been achieved. Col. 4, lines 27-32. Nowhere in Valentine is there any teaching or suggestion, and the Examiner cites to none, relating to defining a pulse function for the half rate modulator 66 (or alternately, the full rate modulator 64) using the *same* desired cost parameters for defining a pulse function for the full rate modulator 64 (or alternately, the half rate modulator 66).

Based on at least the foregoing, Valentine fails to teach or suggest "defining a pulse function for *a first* modulation scheme ..." and "defining a pulse function for *a second* modulation scheme for the *same desired cost parameters*," as required by claim 33. Additionally, there is no teaching or suggestion in Valentine relating to "determining the resultant cost parameters for each scheme," as recited by claim 33. Moreover, as pointed out above, Valentine, at best, discloses the selection of a half rate modulator 66 during a training routine and selection of a full rate modulator 64 during normal operation. Nowhere in Valentine is there any teaching or suggestion relating to a selection of either the half rate modulator 66 or the full rate modulator 64 based on a determination of resultant cost parameters. As such, Valentine also fails to teach or suggest "selecting the modulation scheme which gives resultant cost parameters given desired cost parameters," as claimed.

For at least these additional reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the § 102(e) rejection of independent claim 33.

II. Rejection of Claims 6 & 7 Under 35 U.S.C. § 103(a)

Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Valentine in view of Summers (U.S. Patent No. 5,070,254; hereinafter "Summers"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Valentine is deficient vis-à-vis independent claim 1. Summers does not compensate for the deficiencies of Valentine. Accordingly, claims 6 and 7 are patentable at least by virtue of their dependencies from claim 1. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claims 6 and 7.

III. Rejection of Claims 14, 17 and 18 Under 35 U.S.C. § 103(a)

Claims 14, 17 and 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Valentine in view of Miya (U.S. Patent No. 5,572,516; hereinafter "Miya"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Valentine is deficient vis-à-vis independent claims 1 and 10. Miya does not compensate for the deficiencies of Valentine. Accordingly, claims 14, 17 and 18 are patentable at least by virtue of their respective dependencies from claim 10 and claim 1. Applicant therefore respectfully request the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claims 14, 17 and 18.

IV. Rejection of Claims 15 and 16 Under 35 U.S.C. § 103(a)

Claims 15 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Valentine in view of Applicant's admitted prior art (APA). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Valentine is deficient vis-à-vis independent claim 10. The APA does not compensate for the deficiencies of Valentine. Accordingly, claims 15 and 16 are patentable at least by virtue of their dependencies from claim 10. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claims 15 and 16.

V. Rejection of Claim 25 Under 35 U.S.C. § 103(a)

Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Valentine in view of Dent (U.S. Patent No. 5,909,460; hereinafter; "Dent"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Valentine is deficient vis-à-vis independent claim 24. Dent does not compensate for the deficiencies of Valentine. Accordingly, claim 25 is patentable at least by virtue of its dependency from claim 24. Applicant therefore respectfully request the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claim 25.

VI. Rejection of Claim 28 under 35 U.S.C. § 103(a)

The Examiner rejected claim 28 under 35 U.S.C. § 103(a) as being unpatentable over Miya et al. (U.S. Patent No. 5,572,516; hereinafter; "Miya") in view of Valentine.

Claim 28 requires, "[a] dual mode communication device operable in a first mode in a TDMA telecommunications system in which a channel combination frequency and a timeslot and a second mode in a CDMA telecommunications system, comprising," *inter alia*, a pulse function generator for *shaping* a data stream in accordance with respective pulse functions responsive to the mode of operation of the communication device *and distortion* by a component of the transmitter."

Applicant respectfully submits that the combination of Miya and Valentine does not teach or suggest at least the above features of claim 28. In the rejection of claim 28, the Examiner alleges that "Miya discloses a dual mode communication device operable in a first mode (TDMA) and a second mode (CDMA)" and that "[p]ulses are generated according to the transmission mode selected." (See paragraph 9 on pg. 7 of the Office Action) The Examiner correctly concedes that Miya does not disclose a pulse function generator for shaping a data stream in accordance with respective pulse functions responsive to the mode of operation of the communication device and distortion by a component of the transmitter. However, the Examiner relies on Valentine to make up for the deficient teachings of Miya.

Even *assuming arguendo* that Miya discloses a dual mode communication device operable in a first mode (TDMA) and a second mode (CDMA) and that pulses are generated according to the transmission mode selected, as suggested by the Examiner, Applicant submits that the combination of Miya and Valentine still does not teach or suggest the features of claim 28. Applicant notes that there is no (expressed or implied) teaching or suggestion in Valentine that the radio apparatus 10 disclosed therein is a dual mode radio apparatus operable in a first mode such as TDMA and a second mode such as CDMA. There is also no expressed or implied suggestion or motivation in Valentine that the radio apparatus 10 disclosed therein is capable of adjusting pulses for both TDMA and CDMA based on distortion generated by a component of the transmitter 12.

In view of the foregoing, Applicant submits that there simply is no expressed or implied suggestion (or motivation) in Valentine to modify the radio apparatus 10 disclosed therein in the manner suggested by the Examiner. The only teaching comes from Applicant's own disclosure which constitutes impermissible hindsight reconstruction according to *In re Vaeck* 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

As mentioned above, there is no expressed or implied teaching or suggestion in Valentine that the radio apparatus 10 disclosed therein is capable of adjusting pulses for both TDMA and CDMA based on distortion generated by a component of the transmitter 12. In contrast, Valentine, at best, suggests that the radio apparatus 10 is capable of adjusting signals that conform to a single digital radio standard. Accordingly, Applicant submits that the Examiner's proposed modification changes the principle of operation of the radio apparatus 10 of Valentine. (See MPEP 2143.01) As such, Applicant submits that the proposed modification is deficient and does not teach or suggest the features of claim 28.

For at least the above reasons, Applicant submits that an artisan of ordinary skill would not have combined the applied references in the manner suggested by the Examiner to produce the subject matter of claim 28. Accordingly, the Examiner's proposed modification of Miya and Valentine do not teach or suggest the features of claim 28 and cannot be said to render claim 28 obvious within the meaning of 35 U.S.C. § 103. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of independent claim 28.

VII. Conclusion

In view of the foregoing remarks, Applicant respectfully submits that all of the claims of the present application are in condition for allowance. It is respectfully requested that a Notice of Allowance be issued in due course. Examiner Burd is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of

this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

Guy R. Gosnell
Registration No. 34,610

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111